

This listing of claims will replace all prior versions and listings of claims in the parent application.

LISTING OF CLAIMS

Claims 1-20 (Cancelled).

21. (Original) A three dimensional object comprising:

a first one-piece build style lattice including a plurality of substantially uniform build style units; and

a second one-piece build style lattice integrally formed with and interlaced with the first lattice, the second lattice including a plurality of substantially uniform build style units.

22. (Original) The object set forth in claim 21 wherein the first lattice is made of a first material and the second build style lattice is made of a second material.

23. (Original) The object set forth in claim 21 wherein the first build style lattice includes a plurality of interconnected legs and nodes.

24. (Original) The object set forth in claim 23 wherein the legs of the first build style lattice have a substantially uniform thickness.

25. (Original) The object set forth in claim 24 wherein the second build style lattice includes a second plurality of interconnected legs and nodes having a substantially uniform thickness different from the thickness of the legs of first lattice.

26. (Original) The object set forth in claim 25 wherein the object has a first region and a second region, wherein said first and second build style lattices extend into the first region and the second region, and wherein the thickness of the legs of the first lattice and the thickness of the legs of the second lattice vary from the first region to the second region.

27. (Original) The object set forth in claim 26 wherein the thickness of the legs of the first build style lattice and the thickness of the legs of the second build style lattice vary inversely from the first region to the second region.

28. (Original) The object set forth in claim 21 wherein the first and second build style lattices define therebetween an interface.

29. (Original) The object set forth in claim 28 wherein the interface is substantially hollow.

30. (Original) The object set forth in claim 29 wherein the interface is occupied by a fluid.

31. (Original) The object set forth in claim 28 wherein the interface defines at least one channel for conducting a fluid along a predetermined path.

32. (Original) The object set forth in claim 31 wherein the channel has a cross-section which narrows to define a capillary.

33. (Original) The object set forth in claim 28 wherein the interface is occupied by a solid material.

34. (Original) The object set forth in claim 33 wherein the interface is occupied by the legs of the first and second build style lattices.

35. (Original) The object set forth in claim 21 wherein the object includes a boundary skin and wherein the first build style lattice supports the skin.

36. (Original) The object set forth in claim 35 wherein the second build style lattice supports the boundary skin.

37. (Original) The object set forth in claim 23 wherein the legs of the first lattice are hollow.

38. (Original) The object set forth in claim 37 wherein the legs of the first build style lattice define respective bores having an inner diameter and wherein the inner diameters of the bores vary to form at least one capillary.

39. (Original) The object set forth in claim 37 and further including a boundary skin supported by at least one of the first and second build style lattices.

40. (Original) A three dimensional object formed through use of a free form fabrication method comprising the steps of:

generating a digital representation of the object including a representation of a surface of the object;

generating a digital representation of a first build style lattice having a predetermined, substantially uniform structure;

generating a digital representation of a second build style lattice having a structure similar to the first build style lattice;

intersecting the overlaid representations to generate a digital representation of the object incorporating the first and second build style lattices; and

fabricating the digital representation of the object incorporating the first and second build style lattices to form a boundary skin, a first lattice integrally formed with and extending from the skin and a second lattice interlaced with the first lattice and integrally formed with and extending from the skin.